

Comparison of In

Radionuclide*	Units	EPA CERCLA Methodology – Site Specific	EPA CWA Methodology - Defaults
		Site-Specific Instream Ambient Water Quality Criteria (AWQC) Equivalent (assumes 15 fish meals/year)	CWA Guidance Defaults Instream AWQC (assumes 34 fish meals/year)
Cs-137	pCi/L	1.2	0.19
Sr-90	pCi/L	385	89
Tc-99	pCi/L	1,883	297
U-238	pCi/L	972	214

* Most mobile and commonly detected radionuclides at Oak Ridge Reservation.

**These are example calculations only since actual radionuclide discharge limits will be a

*** For comparison purposes, the drinking water standard (i.e., MCL) for Cs-137 is 200 pCi/L

Stream Water Quality Criteria for Bear Creek

Example End of Pipe Effluent Rad Discharge Limit (assuming assimilative capacity of 3)**	Example End of Pipe Effluent Rad Discharge Limit (assuming assimilative capacity of 16)**	Current Average Discharge Measurements at the EMWMF (current landfill)	DOE Proposal
			25% DCS Value
3.6	19.2	5.05	750
1,155	6160	3.41	275
5,649	30128	171	11,000
2,916	15552	1.66	188

function of the implemented engineering controls (size of pipe, water flow rate at end of pipe, flow rate of receiving body of water, etc.).